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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,952	10/28/2003	Noriyuki Sakuma	8017-1104	3651
466	7590	09/08/2004	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			MACARTHUR, SYLVIA	
			ART UNIT	PAPER NUMBER

1763

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/693,952	SAKUMA ET AL.	
	Examiner	Art Unit	
	Sylvia R MacArthur	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,8,9,12,13,16 and 17 is/are rejected.
- 7) ☒ Claim(s) 2,3,6,7,10,11,14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/28/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: Line 8 states that the “wafer “ is honed by the conditioner, however the term should be “pad”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Homma et al (US 6,561,875).

Regarding claim 1: Homma et al teaches an apparatus and method for producing substrate with electrical wire thereon. Homma et al teaches an apparatus comprising an abrasive pad 11, a platen 10 for holding a wafer 100 and rotating the wafer while pressing the wafer against the pad and a conditioning mechanism including a conditioner 16 that hones the pad, a conditioner driving unit (not shown) that holds and rotates the conditioner, an arm (not shown) that holds the conditioner driving unit, and a plurality of detectors, one detector 14a that detects the force in the rotational direction, and a detector 13a that detects force in the radial direction.

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Regarding claim 4: The detectors are load cells according to col. 8 lines 8-10.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 8, 9, 12, 13, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Homma et al in view of Yoshida et al (US 6,191,038).

The teachings of Homma et al were discussed above.

Regarding claims 5 and 8: The apparatus of Homma et al fails to comprise a memory for storing correlations between output values of the detectors and polishing quantities of the wafer.

Yoshida et al teaches that the force is monitored and stored in col. 7 lines 58-67.

The motivation to provide the monitoring of Yoshida et al in the apparatus of Homma et al is to ensure that the conditioner provides the optimal force to the pad and thus promotes optimal conditioning of the pad and results in a more optimal uniform polishing product.

Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to modify the apparatus of Homma et al with the teachings of Yoshida et al.

Regarding claims 9, 12, 13, and 16: The apparatus of Homma et al fails to comprises a controller which determines if the detection values are within acceptable limits and when any are out of the limits, the conditioning terms are changed.

Yoshida et al teaches a conditioning controller 110 controls the rotation of the conditioner and sets the processing parameters, see col. 8 lines 12-22.

The motivation to modify the apparatus of Homma et al with the controller of Yoshida et al is to ensure that the conditioner provides the optimal force to the pad and thus promotes optimal conditioning of the pad and results in a more optimal uniform polishing product.

Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to modify the apparatus of Homma et al with the teachings of Yoshida et al.

Regarding claim 17: Homma et al discusses this method in the abstract of Yoshida et al.

Allowable Subject Matter


6. Claims 2, 3, 6, 7, 10, 11,14, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to teach or fairly suggest two radial directional pressure detectors located between the both sides along the radial direction of the platen and a fixing jig as claimed in claim 2 of the present invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-F during the core hours of 8 a.m. and 2 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 571-272-1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sylvia R MacArthur
Patent Examiner
Art Unit 1763

September 3, 2004